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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Thomas Burkhardt

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EXAMINER

DESH PANDE, KALYAN K

ART UNIT

PAPER NUMBER

3625

NOTIFICATION DATE DELIVERY MODE

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ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

CANDY_SANDERS@i2.COM

Office Action Summary	Application No. 09/963,960	Applicant(s) BURKHARDT ET AL.	
	Examiner Kalyan K. Deshpande	Art Unit 3625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on 07 April 2008.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 1-7, 9-16, 18-25 and 27-30 is/are pending in the application.

 4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) 1-7, 9-16, 18-25, and 27-30 is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some * c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. _____.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
 Paper No(s)/Mail Date _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Introduction

1. The following is a non-final office action in response to the communications received on April 7, 2008. Claims 1-7, 9-16, 18-25, and 27-30 are now pending in this application.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 7, 2008 has been entered.

Response to Amendments

3. Applicants' amendments to claims 1, 9-10, 18-19, and 27 are acknowledged.

Response to Arguments

4. Applicants' arguments filed on April 7, 2008 have been fully considered but are not found persuasive in part. Applicants argue i) Examiner's finding of Official Notice is improper, ii) Jameson fails to teach "method for solving a supply chain planning problem", iii) Jameson fails to teach "solving each of said plurality of said independent sub-problems by separate processes operating in parallel", iv) there is no motivation to combine Jameson to Fierro, .

In response to Applicants' argument that Examiner's finding of Official Notice is improper, Examiner respectfully disagrees. Examiner maintains the position that no Official Notice has been taken regarding "a method for solving a supply chain problem". Applicants cite to page 6 of the July 26, 2007 Office Action, however, no taking of Official Notice can be found. Therefore, Examiner submits that this argument is moot as no Official Notice has been taken.

In response to Applicants' argument Jameson fails to teach "method for solving a supply chain planning problem", Examiner respectfully disagrees. In the July 26, 2007 Office Action, Examiner submitted the position that a resource planning problem is the same as a supply chain problem. Applicants' arguments that Examiner has taken the position that a resource planning problem is *part of* a supply chain planning problem is therefore inaccurate, and therefore moot. Examiner maintains that a resource allocation problem is a supply chain planning problem and is taught by Jameson (see Jameson abstract). Thus, solving a resource planning problem is the same as solving a supply chain planning problem. Examiner further notes that the recitation of "solving a supply chain planning problem" is merely in the preamble of the claims, and a preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951). The preamble of "solving a supply chain planning problem" has the single purpose of

establishing an intended use for the invention and therefore should not be afforded any patentable weight.

In response to Applicants' argument Jameson fails to teach "solving each of said plurality of said independent sub-problems by separate processes operating in parallel", Examiner respectfully disagrees. Jameson explicitly teaches "solving each of said plurality of said independent sub-problems by separate processes operating in parallel" (see Jameson column 8 lines 8-25; where the sub-problems are solved to determine the optimal allocation point. Each sub-problem is solved independently. The matrices are stored on individual machines thus allowing the matrices to be stored across several computers. A distributed database is defined as a database that be distributed to several computers.). Applicants' arguments fail to specifically point out how the present invention is distinguished from the prior art with respect to this limitation and therefore this argument fails to comply with 37 C.F.R. 1.111(b).

Applicants' argument "there is no motivation to combine Jameson and Official Notice" (see Remarks p. 21) is moot as Examiner has not taken Official Notice in rejecting claims 1-7, 9-16, 18-25, and 27-30.

Applicants' argument "there is no motivation to combine Jameson to Fierro" (see Remarks p. 21) is moot as Examiner has not applied Fierro in rejecting claims 1-7, 9-16, 18-25, and 27-30.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-7, 9-16, 18-25, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jameson (U.S. Patent No. 6219649) in view of Christensen (U.S. Patent Publication No. 20020049759).

As per claim 1, Jameson teaches “a computer –implemented method for solving a supply chain planning problem (see abstract; where a resource allocation optimization method is disclosed. A resource allocation method is a supply chain planning problem.), comprising: decomposing the supply chain planning problem into a plurality of independent subproblems” (see Jameson column 7 lines 45-54; where the allocation problem is divided in to simpler sub-problems. Resource allocation is a part of supply chain management.) and “solving each of said plurality of said independent sub-problems by separate processes operating in parallel” (see Jameson column 8 lines 8-25; where the sub-problems are solved to determine the optimal allocation point. Each sub-problem is solved independently. The matrices are stored on individual machines thus allowing the matrices to be stored across several computers. A distributed database is defined as a database that be distributed to several computers.). Jameson fails to explicitly teach organizing the sub-problems in to partitions and imploring processors to execute the database partitions. Christensen, in an analogous art, teaches “providing a plurality of distributed database partitions, each partition of said plurality of distributed database partitions associated with a respective independent data hunks of said supply chain planning problem” (see Christensen abstract and paragraph

46; where a plurality of database partitions are provided to for processing data hunks.), "operating a plurality of processors in said database, each processor of said plurality of processors associated with a respective partition of said plurality of distributed database partitions" (see Christensen abstract and paragraph 46; where parallel processing is used to process the database partitions.), "forming a plurality of distributed sub-problem partitions, each of said distributed sub-problem partitions including a plurality of related items" (see Christensen abstract and paragraph 46; where the performance monitoring server partitions the database in to hunks. Hunks are related items. Hunks are the same thing as sub-problem partitions.), "loading data into a plurality of distributed database partitions, said data associated with said plurality of related items, and each of said distributed database partitions associated with a respective one of each of said distributed sub-problem partitions" (see Christensen abstract and paragraph 46; where data is in the distributed database partition. The parallel processing of the distributed database partitions enables faster performance of processing working data.). The advantage of such features is that it enables one of ordinary skill in the art to process information at greater efficiencies. It would have been obvious, at the time of the invention, to one of ordinary skill in the art to combine the features of "providing a plurality of distributed database partitions, each partition of said plurality of distributed database partitions associated with a respective independent data hunks of said supply chain planning problem", "operating a plurality of processors in said database, each processor of said plurality of processors associated with a respective partition of said plurality of distributed database partitions", "forming a plurality of distributed sub-

problem partitions, each of said distributed sub-problem partitions including a plurality of related items", "loading data into a plurality of distributed database partitions, said data associated with said plurality of related items, and each of said distributed database partitions associated with a respective one of each of said distributed sub-problem partitions" taught by Christensen to Jameson in order to increase the performance of the system, which is a goal of Christensen (see abstract).

As per claim 2, Jameson discloses:

The method of Claim 1, further comprising:

Forming a plurality of clusters, each of said clusters including said plurality of related items (see column 8 lines 5-12; where optimal points are clustered and the clusters include the scenario, where scenarios are a set of related events); and

Forming said plurality of distributed sub-problem from said plurality of clusters (see column 5 lines 35-40 and column 11 lines 3-15, column 7 lines 45-54, and column 8 lines 19-21; where the system accounts for larger sub-problems. Sub-problems are defined as larger sub-problems per the specification (see specification p. 9 line 16). Further, clusters are combined to create larger clusters or larger sub-problems. The sub-problems consist of scenarios, where a scenario is a set of related events).

As per claim 3, Jameson teaches the number of sub-problems is equal to the number of clusters (see column 7 lines 58-67, column 8 lines 1-8, and column 19 lines

1-46), however fails to explicitly teach “the number of distributed data is equal to the number of database partitions”. Christensen, in an analogous art, teaches “the number of distributed data is equal to the number of database partitions” (see paragraph 31; where the number of related items is equal to the number of database partitions set to be solved.). The advantage of such features is that it enables one of ordinary skill in the art to process information at greater efficiencies. It would have been obvious, at the time of the invention, to one of ordinary skill in the art to combine the feature of “the number of distributed data is equal to the number of database partitions” taught by Christensen to Jameson in order to increase the performance of the system, which is a goal of Christensen (see abstract).

As per claim 4, Jameson discloses:

The method of Claim 1, wherein said plurality of related items are related by one or more pre-define relationship rules (see column 10 lines 50-68, column 11 lines 1-29, and figures 6-8; where all of the elements of a scenario are processed under pre-defined rules).

As per claim 5, Jameson teaches the method of Claim 2, wherein the forming said plurality of said clusters further comprises a step of storing said clusters (see column 18 lines 49-61; where cluster arguments and function calls are stored to increase performance of future processing by calling stored results). Jameson fails to disclose the step of forming said plurality of said clusters further comprises a step of assigning a CLUSTER_ID to each item of said plurality of related items. It is old and well-known in data management to assign an identification value to items stored in a

database. The step of storing a cluster automatically gives it a CLUSTER_ID in a database row. The advantage of assigning an identification value to items stored in a database is that the item and its respective row can be more efficiently found in the database by simply querying the database for the assigned identification value. It would have been obvious, at the time of the invention, for one of ordinary skill in data management to assign an identification value to the clusters stored in Jameson's system in order to more efficiently find the clusters and their stored results.

As per claim 6, Jameson teaches the step of forming a plurality of distributed sub-problem partitions from said plurality of clusters (see column 7 lines 45-58 and column 24 lines 61-67; where clustering is used to divide resource allocation problems into simpler sub-problems. Using simpler sub-problems enhances the system to run faster and simpler. Furthermore, multiple processors can be used to solve each of the sub-problems.). Although Jameson teaches creating sub-problems in order to facilitate computational time and complexity, Jameson fails to explicitly teach creating sub-problem objects of the same size. It is old and well-known in the art to equally size objects for processing. The advantage of creating objects of the same size is that it increasing the computational speed and minimizing the computational complexity. IT would have been obvious, at the time of the invention, to one of ordinary skill in the art to take the teachings of Jameson to divide an allocation problem into sub-problems and modify Jameson to include the feature of equally sizing the sub-problem partitions in order to increase the system speed and minimizing the computational complexity, which is a goal of Jameson (see column 7 lines 45-57 and column 24 lines 61-67).

As per claim 7, Jameson discloses:

The method of Claim 1, wherein the step of solving each of said plurality of said distributed sub-problems further comprises a step of solving said plurality of independent sub-problems in parallel (see column 24 lines 61-67; where the use of multiple processors is desirably for the parallel execution of multiple instances of clusters).

Claims 9-16, 18-25, and 27 recite a "computer-implemented system for solving a supply chain planning problem" and "software for solving a supply chain planning problem" taught by Jameson (see column 1 lines 13-14 and column 5 lines 35-40).

Claims 10-16, 18-25, and 27 further recite limitations already addressed by the rejections of claims 1-7 and 9; therefore the same rejection applies to this claim.

7. Claims 28-30 rejected under 35 U.S.C. 103(a) as being unpatentable over Jameson (U.S. Patent No. 6219649) in view of Christensen (U.S. Patent Publication No. 20020049759) and in further view of Chopra et al. (Chopra, Sunil; Meindl, Peter; Supply Chain Management: Strategy, Planning, and Operation, Prentice Hall, October 2000).

As per claim 28, Jameson teaches "said supply chain planning problems comprise problems selected from the group consisting of demand forecasting" (see column 5 lines 13-34 and column 19 lines 1-45; where uncertain constraints are handled and a resource allocation problem in terms of an forecasted demand uncertainty is provided.). Jameson fails to explicitly teach supply chain problems of "service level planning" and "replenishment planning". Chopra, in an analogous art, teaches solving supply chain problems for "service level planning" and "replenishment

planning" (see pp. 179-220; where methods for cycle service level planning and replenishment policies is discussed). Chopra further teaches supply chain problems of demand forecasting (see pp. 67-100; where planning for demand using demand certainty and demand uncertainty is done). The advantage of solving supply chain problems of demand forecasting, service level planning, and replenishment planning is that it facilitates the availability of product in light of the supply and demand variability. It would have been obvious, at the time of the invention, to combine the teachings supply chain management with regard to "supply chain problems consisting of demand forecasting, service level planning, and replenishment planning" of Chopra to Jameson in order to facilitate the availability of product in light of the supply and demand variability, which is a goal of Chopra (see p. 179-180).

Claims 29-30 recite a "computer-implemented system for solving a supply chain planning problem" and "software for solving a supply chain planning problem" taught by Jameson (see column 1 lines 13-14 and column 5 lines 35-40). Claims 29-30 further recite limitations already addressed by the rejection of claim 28; therefore the same rejection applies to these claims.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kalyan K. Deshpande whose telephone number is (571)272-5880. The examiner can normally be reached on M-F 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey A. Smith can be reached on (571) 272-6763. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Jeffrey A. Smith/
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